Curriculum Vitae

Jeff Peischl

NOAA R/GML, 325 Broadway
Boulder, CO 80305
Office: (303) 219-0566
Email: jeffrey.peischl@colorado.edu

Professional Competencies

- Measurement-based evaluation of atmospheric sources and sinks of greenhouse gases and volatile organic carbon species carbon dioxide, methane, ethane, nitrous oxide, and carbon monoxide
- Measurement-based evaluation of emission inventories of atmospheric pollutants
- Instrument design and deployment for field sampling of long-lived trace gases from ground, mobile, and aircraft platforms
- Interpretation and analysis of atmospheric data sets followed by publication and communication of findings for use by scientists and decision makers

Experience

Cooperative Institute for Research in Environmental Sciences, University of Colorado Boulder, Boulder, CO and **National Oceanic and Atmospheric Administration**, Global Monitoring Laboratory and Chemical Sciences Laboratory, Boulder, CO

Sr. Associate Scientist, May 2024 – present. Course of research: Field measurements of carbon dioxide, methane, carbon monoxide, ozone, and water vapor to supplement NOAA GML's existing long-term measurement sites in the U.S. Analysis of data and presentation of findings at scientific conferences. Co-Investigator of project to install a greenhouse gas analyzer aboard a commercial Boeing 737 airliner. Full time.

Research Scientist III, February – May 2024,
Sr. Associate Scientist, July 2020 – January 2024,
Associate Scientist III, July 2014 – June 2020. Course of research: Field measurements of carbon dioxide, methane, ethane, nitrous oxide, carbon monoxide, nitrogen oxides, and ozone. Design, construction, and evaluation of field instrumentation for measurement of trace gases in the troposphere. Analysis of data and presentation of findings at scientific conferences and publication in peer-reviewed scientific journals. Full time.

Associate Scientist II, July 2008 – June 2014. Course of research: Field measurements of carbon dioxide, methane, nitrogen oxides, and ozone. Design, construction, and evaluation of field instrumentation for measurement of trace gases in the troposphere. Analysis of data and presentation of findings at scientific conferences and publication in peer-reviewed scientific journals. Full time.

Associate Scientist I, September 2005 – June 2008. Course of research: Design, construction, and evaluation of aircraft instrumentation for measurement of carbon dioxide and other trace gases in the troposphere. Full time.

New Mexico Institute of Mining and Technology, Socorro, NM
Graduate Student, 2004 to 2005. Design, construction, and deployment of balloon sonde instrumentation for measurement of 3-dimensional electric field changes during thunderstorms.

Georgia Institute of Technology, Atlanta, GA
Laboratory Assistant, *2001 to 2004*. Design, construction, deployment, and evaluation of field instrumentation for measurement of nitrogen oxides in the troposphere.

Selected publications

Peischl, J., et al. (2023), Quantifying anomalies of air pollutants in nine U.S. cities during 2020 due to COVID-19 lockdowns and wildfires based on decadal trends, *Elementa*, doi:10.1525/elementa.2023.00029

Alvarez, R. A., D. Zavala-Araiza, D. R. Lyon, D. T. Allen, Z. R. Barkley, A. R. Brandt, K. J. Davis, S. C. Herndon, D. J. Jacob, A. Karion, E. A. Kort, B. K. Lamb, T. Lauvaux, J. D. Maasakkers, A. J. Marchese, M. Omara, S. W. Pacala, **J. Peischl**, A. L. Robinson, P. B. Shepson, C. Sweeney, A. Townsend-Small, S. C. Wofsy, S. P. Hamburg (2018), Assessment of methane emissions from the U.S. oil and gas supply chain, *Science*, doi:10.1126/science.aar7204

Peischl, J., et al. (2018), Quantifying methane and ethane emissions to the atmosphere from central and western U.S. oil and natural gas production regions, *J. Geophys. Res. Atmos.*, *123*, doi:10.1029/2018JD028622

Peischl, J., et al. (2016), Quantifying atmospheric methane emissions from oil and natural gas production in the Bakken shale region of North Dakota, *J. Geophys. Res. Atmos.*, *121*, doi:10.1002/2015JD024631.

Conley, S., G. Franco, I. Faloona, D. R. Blake, **J. Peischl**, and T. B. Ryerson (2016), Methane emissions from the 2015 Aliso Canyon blowout in Los Angeles, CA, *Science*, *351*, 1317–1320, doi:10.1126/science.aaf2348.

Peischl, J., et al. (2015), Quantifying atmospheric methane emissions from the Haynesville, Fayetteville, and northeastern Marcellus shale gas production regions, *J. Geophys. Res. Atmos.*, *120*, 2119–2139, doi:10.1002/2014JD022697.

Peischl, J., et al. (2013), Quantifying sources of methane using light alkanes in the Los Angeles basin, California, *J. Geophys. Res. Atmos.*, *118*, 4974–4990, doi:10.1002/jgrd.50413.

Peischl, J., et al. (2012), Airborne observations of methane emissions from rice cultivation in the Sacramento Valley of California, *J. Geophys. Res.*, *117*, D00V25, doi:10.1029/2012JD017994.

Peischl, J., et al. (2010), A top-down analysis of emissions from selected Texas power plants during TexAQS 2000 and 2006, *J. Geophys. Res.*, *115*, D16303, doi:10.1029/2009JD013527.

Awards

Cooperative Institute for Research in Environmental Sciences, Outstanding Performance Award (2025): *For designing, executing, and refining a groundbreaking airborne survey that has significantly advanced greenhouse gas monitoring across the United States.*

Cooperative Institute for Research in Environmental Sciences, Bronze Medal (2023): *For exceptional service to communities affected by the Marshall Fire in providing timely air quality information to support recovery efforts.*

National Aeronautics and Space Administration, Group Achievement Award (2023): *For outstanding scientific achievements of the Fire Influence on Regional to Global Environments Experiment – Air Quality (FIREX-AQ) airborne Earth science mission team.*

CO-LABS Governor's Award for High Impact Research (2022): *Atmospheric Science Award for Rapid-response science in service to communities after the Marshall Fire.*

Boulder County Public Health, Healthy Community Award (2022): *For exemplifying the mission of Boulder County Public Health and improving the health and well-being of the people and environment of Boulder County.*

Cooperative Institute for Research in Environmental Sciences, Bronze Medal (2022): *For synthesis, critical evaluation, and communication to scientists and the public about the global air quality impacts of COVID-19 pandemic lockdowns.*

Cooperative Institute for Research in Environmental Sciences, Administrator Award (2020): *For the planning and conduct of the largest interdisciplinary research project ever to study wildfire smoke composition, chemistry, and evolution.*

Cooperative Institute for Research in Environmental Sciences, Bronze Medal (2020): *For outstanding execution of the FIREX-AQ mission, a joint venture with NASA to improve understanding of air quality and climate impacts of fires.*

National Aeronautics and Space Administration, Group Achievement Award (2019): *For outstanding scientific accomplishments by the Atom team in exploring remote swaths of the global atmosphere to improve our understanding of climate and air quality.*

Cooperative Institute for Research in Environmental Sciences, CIRES cash award (2016): *Extraordinary service to research for the Aliso Canyon natural gas blowout.*

Cooperative Institute for Research in Environmental Sciences, Outstanding Performance Award (2015): *For extraordinary leadership and innovative research measuring and analyzing greenhouse gases.*

National Aeronautics and Space Administration, Group Achievement Award (2015): *For outstanding accomplishments, Studies of Emissions and Atmospheric Composition, Clouds and Climate Coupling by Regional Surveys (SEAC4RS) in 2013.*

CO-LABS Governor's Award for High Impact Research (2014): *Atmospheric Science Award for Atmospheric Impacts of Rapidly Expanding Oil & Gas Development Across the West.*

CO-LABS Governor's Award for High Impact Research (2012): *Rapid-Response Atmospheric Science to Assess the Deepwater Horizon Oil Spill Crisis*.

Cooperative Institute for Research in Environmental Sciences, Outstanding Performance Award (2011): *In Collaboration with the Deepwater Horizon P-3 Response Team*.

Department of Commerce Boulder Laboratories Postdoctoral Poster Symposium, Outstanding Poster Award (2008).

Education

University College Cork, Cork, Ireland
Ph.D., Physics, November 2023

Emory University School of Law, Atlanta, GA
J.D., May 1998

The George Washington University, Washington, DC
B.S., Economics, May 1995

Non-degree work:
New Mexico Institute of Mining and Technology, Socorro, NM
Atmospheric Physics, August 2004 – May 2005

Georgia Institute of Technology, Atlanta, GA
Physics, August 2001 – May 2004

Perimeter College
January 2001 – August 2001

Coursework includes a total of 49 credits of undergraduate-level physics classes, and 13 credits of graduate-level physics classes.